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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,156

11/01/2005

Jun Takada

042724

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38834

7590

07/07/2008

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP  
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WASHINGTON, DC 20036

EXAMINER

ZHU, WEIPING

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

07/07/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/509,156	<b>Applicant(s)</b> TAKADA ET AL.	
	<b>Examiner</b> WEIPING ZHU	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1 and 7 are currently under examination, wherein claim 1 has been amended and claim 7 has been newly added in applicant's amendments filed on May 20, 2008. The original claims 2-4 have been cancelled by the applicant in the same reply. The non-elected Invention II, claims 5 and 6, wherein claim 5 has been amended, has been withdrawn from consideration by the examiner.

The applicant's election of the Invention I, claims 1-4, with traverse in the reply filed on May 20, 2008 is acknowledged. The traverse is on the ground that WO 01/18276 A1 does not teach the common technical feature in all groups (i.e. worked Mo alloy) as claimed. This is not found persuasive. As stated in the Office action dated February 21, 2008, WO 01/18276 discloses a worked Mo alloy (abstract), which is substantially identical to the claimed worked Mo alloy. The worked Mo alloy of WO 01/18276 does not have to be identical to the claimed worked Mo alloy.

The requirement is still deemed proper and is therefore made FINAL.

### ***Status of Previous Rejections***

2. The previous rejections of claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over WO 01/18276 A1 in view of JP 11-286770 A as stated in the Office action dated February 21, 2008 have been withdrawn in light of applicant's amendments filed on May 20, 2008. The new ground of rejections has been established as follows:

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/18276 A1 in view of JP 11-286770 A.

The WO 01/18276 A1 is in Japanese, therefore, Takada et al. (US 6,589,368), a patent family member of WO 01/18276 A1, has been relied upon to establish the ground(s) of rejections.

With respect to claims 1 and 7, Takada et al. ('368) discloses a worked Mo alloy material subjected to nitriding, which has high strength and high toughness comprising fine nitride particles formed by internally nitriding a nitride-forming metal element incorporated as a solid solution in the worked Mo alloy material and the fine nitride particles being dispersed in a worked structure on an interior recrystallized structure or an interior structure without recrystallization (col. 3, lines 28-46).

Takada et al. ('368) does not disclose that the worked Mo alloy material comprises a Mo nitride layer at the surface of the worked Mo alloy material as claimed. JP ('770 A) discloses a Mo alloy with a Mo nitride layer having a thickness of 0.5 to 10 microns at the surface (abstract) and the Mo nitride at the surface comprising gamma-Mo<sub>2</sub>N, beta-Mo<sub>2</sub>N and delta-MoN (paragraph [0003], machine translation). The thickness range of the Mo nitride layer of JP ('770 A) overlaps the claimed thickness range. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have

been obvious to one of ordinary skill in the art at the time the invention was made to form a Mo nitride layer at the surface of the worked Mo alloy material of Takada et al. ('368) as disclosed by JP ('770 A) in order to improve the corrosion resistance of the worked Mo alloy material of Takada et al. ('368) as disclosed by JP ('770 A) (abstract).

### ***Response to Arguments***

4. The applicant's arguments filed on May 20, 2008 have been fully considered but they are not persuasive.

The applicant argues that a person of ordinary skill in the art would not be motivated to nitride the Mo alloy of Takada et al. ('368) as disclosed by JP ('770 A), because Takada et al. ('368) teaches that the Mo is not nitrified because of preferred nitriding. In response, the examiner notes that Takada et al. ('368) does not teach not to nitride the surface of the worked Mo alloy material to improve the corrosion resistance. As stated above, the motivation to nitride the surface of a Mo alloy is to improve the corrosion resistance of the Mo alloy as disclosed by JP ('770 A) (abstract), which would certainly be very appealing to one of ordinary skill in the art.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/


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Supervisory Patent Examiner, Art  
Unit 1793

WZ

7/2/2008

<div><b>Application Number</b></div> <div></div>	<b>Application/Control No.</b>	<b>Applicant(s)/Patent under Reexamination</b>	
	10/509,156	TAKADA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	WEIPING ZHU	1793	